

# Andrew D Jones

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<b>Education</b>	Ph.D. Energy and Resources Group, UC Berkeley	May 2012
	<i>Advisors:</i> Margaret S. Torn, William D. Collins, Michael O'Hare	
	M.S. Energy and Resources Group, UC Berkeley	Dec 2007
	B.A. Mathematics & Psychology, Washington University in St Louis	May 2001
<b>Professional Experience</b>	Deputy Director, Climate Readiness Institute	2014 – present
	Research Scientist, Lawrence Berkeley National Lab	2014 – present
	Postdoctoral Fellow, Lawrence Berkeley Lab ( <i>Advisor:</i> William D. Collins)	2012 – 2013
	Graduate Student Researcher, Lawrence Berkeley National Lab	2009 - 2012
	Graduate Student Researcher, University of California, Berkeley	2004 - 2009
	Founder & Board Member, Community Arts and Movement Project	2002 - 2004
	Research Assistant, Washington University in St Louis	1999 - 2002
<b>Awards &amp; Fellowships</b>	Environmental Protection Agency STAR Graduate Research Fellowship	2006 - 2009
	National Science Foundation Graduate Research Fellowship	2004 - 2006
	Graduated Summa Cum Laude	2001
	Member Phi Beta Kappa honorary society	2001
<b>Peer-Reviewed Publications (15)</b>	Di Vittorio, A.V., L. P. Chini, B. Bond-Lamberty, J. Mao, X. Shi, J. Truesdale, A. Craig, K. Calvin, A. D. <b>Jones</b> , W. D. Collins, J. Edmonds, G. C. Hurtt, P. Thornton, A. Thomson, (in press), From land use to land cover: restoring the afforestation signal in a coupled integrated assessment – earth system model and the implications for CMIP5 RCP simulations, in press at Biogeosciences.	
	Bond-Lamberty, B., K. V. Calvin, A. D. <b>Jones</b> , J. Mao, P. Patel, X. Shi, A. Thomson, P. Thornton, Y. Zhou (2014), On linking an Earth system model to the equilibrium carbon representation of an economically optimizing land use model, Geoscientific Model Development, 7, 2545-2555, doi:10.5194/gmd-7-2545-2014.	
	Calvin, K. V., M. Wise, L. Clarke, J. Edmonds, A. D. <b>Jones</b> , A. Thomson (2014), Near-term limits to mitigation: challenges arising from contrary mitigation effects from indirect land-use change and sulfur emissions, Energy Economics, 42, 233-239, doi:10.1016/j.eneco.2013.09.026.	

- Jones**, A. D., W. D. Collins, and M. S. Torn (2013), On the additivity of radiative forcing between land use change and greenhouse gases, *Geophysical Research Letters*, 40(15), 4036–4041, doi:10.1002/grl.50754.
- Jones**, A. D. et al. (2013), Greenhouse gas policies influence climate via direct effects of land use change, *J of Climate*, 26(11), 3657–3670, doi:10.1175/JCLI-D-12-00377.1.
- Jones**, A. D., K. V. Calvin, W. D. Collins, J. Edmonds (2013), Towards a more consistent treatment of land-use change within climate assessment, In: *Impacts World 2013 Conference Proceedings*, Potsdam Institute for Climate Impact Research, pp 462–469, doi:10.2312/pik.2013.001.
- Levis, S., G. B. Bonan, E. Kluzek, P. E. Thornton, A. **Jones**, W. J. Sacks, and C. J. Kucharik (2012), Interactive crop management in the Community Earth System Model (CESM1): Seasonal influences on land-atmosphere fluxes, *J. Climate*, 25(14), 4839–4859, doi:10.1175/JCLI-D-11-00446.1.
- Plevin, R. J., M. O’Hare, A. D. **Jones**, M. S. Torn, and H. K. Gibbs (2010), Greenhouse Gas Emissions from Biofuels’ Indirect Land Use Change Are Uncertain but May Be Much Greater than Previously Estimated, *Environmental Science & Technology*, 44(21), 8015–8021, doi:10.1021/es101946t.
- Lemoine, D. M., R. J. Plevin, A. S. Cohn, A. D. **Jones**, A. R. Brandt, S. E. Vergara, and D. M. Kammen (2010), The climate impacts of bioenergy systems depend on market and regulatory policy contexts, *Environmental Science & Technology*, 44(19), 7347–7350, doi:10.1021/es100418p.
- Hertel, T. W., A. A. Golub, A. D. **Jones**, M. O’Hare, R. J. Plevin, and D. M. Kammen (2010), Effects of US Maize Ethanol on Global Land Use and Greenhouse Gas Emissions: Estimating Market-mediated Responses, *BioScience*, 60(3), 223–231, doi:10.1525/bio.2010.60.3.8.
- O’Hare, M., R. J. Plevin, J. I. Martin, A. D. **Jones**, A. Kendall, and E. Hopson (2009), Proper accounting for time increases crop-based biofuels’ greenhouse gas deficit versus petroleum, *Environ. Res. Lett.*, 4(2), 024001, doi:10.1088/1748-9326/4/2/024001.
- Kammen, D. M., A. E. Farrell, R. J. Plevin, A. D. **Jones**, G. F. Nemet, and M. A. Delucchi (2008), Energy and greenhouse gas impacts of biofuels: a framework for analysis, *OECD Research Roundtable*, doi:10.1787/235683015007.
- Farrell, A. E., R. J. Plevin, B. T. Turner, A. D. **Jones**, M. O’Hare, and D. M. Kammen (2006), Ethanol can contribute to energy and environmental goals, *Science*, 311(5760), 506–508, doi:10.1126/science.1121416. \*
- \*This article has more than 1100 citations*
- Jones**, A. D., R. Y. Cho, L. E. Nystrom, J. D. Cohen, and T. S. Braver (2002), A computational model of anterior cingulate function in speeded response tasks: Effects of frequency, sequence, and conflict, *Cognitive, Affective, & Behavioral Neuroscience*, 2(4), 300–317, doi:10.3758/CABN.2.4.300.

Cho, R. Y., L. E. Nystrom, E. T. Brown, A. D. **Jones**, T. S. Braver, P. J. Holmes, and J. D. Cohen (2002), Mechanisms underlying dependencies of performance on stimulus history in a two-alternative forced-choice task, *Cognitive, Affective, & Behavioral Neuroscience*, 2(4), 283–299, doi:10.3758/CABN.2.4.283.

**Publications  
Submitted  
& In Review**

**Jones**, A.D., K. V. Calvin, W. D. Collins, J. Edmonds, (in review), Accounting for radiative forcing from albedo change in future land-use scenarios, in review at *Climatic Change*

Collins, W. D., A. Craig, J. Truesdale, A. D. **Jones**, A. V. DiVittorio, Y. Zhou, J. A. Edmonds, A. M. Thomson, L. P. Chini, B. Bond-Lamberty, S. H. Kim, P. E. Thornton, J. Miao, X. Shi. (in review), The Integrated Earth System Model (iESM): Formulation and Functionality, in review at *Geoscientific Model Development*.

**Reports &  
Working  
Papers**

Williams, J.H., B. Haley, F. Kahrl, J. Moore, A.D. **Jones**, M.S. Torn, H. McJeon (2014). Pathways to deep decarbonization in the United States. The U.S. report of the Deep Decarbonization Pathways Project of the Sustainable Development Solutions Network and the Institute for Sustainable Development and International Relations.

Farrell, A. E., D. Sperling, et al. (2007), A Low-Carbon Fuel Standard for California, Part 2: Policy Analysis, *Regents of the University of California*, for California Air Resources Board ([http://www.arb.ca.gov/fuels/lcfs/lcfs\\_uc\\_p2.pdf](http://www.arb.ca.gov/fuels/lcfs/lcfs_uc_p2.pdf)).

Farrell, A. E., Sperling D., et al. (2007), A Low-Carbon Fuel Standard for California, Part 1: Technical Analysis, *Regents of the University of California*, for California Air Resources Board ([http://www.arb.ca.gov/fuels/lcfs/lcfs\\_uc\\_p1.pdf](http://www.arb.ca.gov/fuels/lcfs/lcfs_uc_p1.pdf)).

**Jones**, A. D., M. O'Hare, A. D. Farrell (2007), Biofuel Boundaries: Estimating the Near-Term Supply Potential of Domestic Biofuels, *UC Berkeley Transportation Sustainability Research Center*, Paper UCB-ITS-TSRC-RR-2007-4 (<http://escholarship.org/uc/item/950662sc>).

Plevin, R. J., and A. D. **Jones** (2005), Organic Ethanol. Renewable and Appropriate Energy Lab Working Paper, 2005. (<http://plevin.berkeley.edu/docs/Plevin-Jones-Organic-EtOH-Working-Paper-v1.pdf>).

**Invited Talks  
(5)**

**Jones**, A. D. (2014), The Climate Readiness Institute: Partnering academics and practitioners to address climate change at the local scale, presented at the Climate and Health Idea Lab, UC Berkeley, Berkeley, CA, 3 Nov.

**Jones**, A. D., W. D. Collins, M. S. Torn, K. V. Calvin, J. Edmonds (2014), Land use scenarios to meet multiple needs for CMIP6, presented at Aspen Global Change Institute Workshop on Experimental Design for CMIP6: Aerosol, Land Use, and Future Scenarios, Aspen, CO, 5 Aug.

**Jones**, A. D. (2014), Using climate model projections for impacts analysis, presented at the Latin America Modeling Project Workshop, Bogota, Colombia, 28 May.

**Jones**, A. D. (2013), The role of land-use change in shaping future patterns of climate,

presented at the Pardee Center for the Study of the Longer Range Future, Boston University, Boston, MA, 14 Aug.

**Jones, A. D., M. S. Torn, W. D. Collins, J. A. Edmonds, G. C. Hurtt, K. V. Calvin, A. C. Janetos, J. Mao, L. P. Chini, A. M. Thomson, P. E. Thornton (2011), Implications of alternative scenarios of future land use change: an application of integrated Earth system modeling, presented at Stanford University, Stanford, CA, 16 Nov.**

**Other  
Presentations  
Since 2008**

**Jones, A. D., K. V. Calvin, W. D. Collins, and J. A. Edmonds (2014), Accounting for radiative forcing from albedo change in future land-use scenarios, presented at the 7<sup>th</sup> Annual Meeting of the Integrated Assessment Modeling Consortium, University of Maryland, College Park, MD, 17-19 Nov.**

Calvin, K. V., A. D. **Jones**, J. Edmonds, W. D. Collins (2014), Including albedo effects in IAM scenarios, presented at DOE principle investigator meeting, Potomac, MD, 14 May.

**Jones, A. D., W. D. Collins, M. S. Torn (2013) Pattern scaling of land-use climate response relationships, Abstract GC42A-07 presented at 2013 Fall Meeting, AGU, San Francisco, CA, 12 Dec.**

Di Vittorio, A.V., B. Bond-Lamberty, L.P. Chini, J. Mao, X. Shi, J. Truesdale, A. Craig, K. Calvin, A. **Jones**, W.D. Collins, J. Edmonds, G.C. Hurtt, P. Thornton, A. Thomson, From land use to land cover: Restoring the afforestation signal from GCAM to CESM and the implications for CMIP5 RCP simulations, Joint CESM Land Model and Societal Dimensions Working Group Meeting, February 2014.

Di Vittorio, A.V., B. Bond-Lamberty, K. Calvin, L.P. Chini, W.D. Collins, A. Craig, J. Edmonds, G.C. Hurtt, A. **Jones**, J. Mao, P. Patel, X. Shi, A. Thomson, P. Thornton, J. Truesdale, Y. Zhou, Coupling the land use decisions and carbon cycles of earth system and integrated assessment models, DOE CESD Climate PI Science Team Meeting, Potomac, MD, May 2013.

**Jones, A. D., and W. D. Collins (2013), Anthropogenic climate feedbacks via changes in crop productivity, poster presented at the Agricultural Model Intercomparison and Improvement Project 4<sup>th</sup> Annual Global Workshop, Columbia University, New York, NY, 28-30 Oct.**

**Jones, A. D., K. V. Calvin, W. D. Collins, and J. A. Edmonds (2013), Integrating albedo into integrated assessment, presented at the Global Technology Strategy Program annual meeting, JGCRI, College Park, MD, 1-3 Oct.**

**Jones, A. D. (2013), Regional crop yield distributions to inform land-use change modeling, poster presented at the Community Earth System Model Annual Workshop, NCAR, Breckenridge, CO, 17-20 Jun.**

**Jones, A. D., and W. D. Collins (2013), Anthropogenic climate feedbacks via changes in crop productivity, poster presented at Climate Smart Agriculture: Global Science Conference, UC Davis, Davis, CA, 20-22 Mar.**

**Jones, A. D., K. V. Calvin, W. D. Collins, and J. A. Edmonds (2013), Toward a more**

consistent treatment of land-use change within climate assessment, presented at the Community Earth System Model Joint Societal Dimensions and Land Model Working Group Meeting, NCAR, Boulder, CO, 19-22 Feb.

**Jones**, A. D., W. D. Collins, M. S. Torn, and K. V. Calvin (2012), Climate implications of including albedo effects in terrestrial carbon policy, Abstract GC11B-0982 poster presented at 2012 Fall Meeting, AGU, San Francisco, Calif., 3-7 Dec.

Collins, W. D., J. A. Edmonds, P. E. Thornton, A. Craig, G. C. Hurtt, A. C. Janetos, A. D. **Jones**, C. D. Koven, W. J. Riley, and J. Truesdale (2012), Prospects for projecting the impact of Earth system processes on integrated assessment, Abstract A54A-08 presented at 2012 Fall Meeting, AGU, San Francisco, Calif., 3-7 Dec.

**Jones**, A. D., and A. M. Thomson (2012), Exploring human-climate interactions with the integrated Earth System Model, presented at the Community Earth System Model Annual Workshop, NCAR, Breckenridge, CO, 18-21 Jun.

**Jones**, A. D. (2012), Land-use change is a critical influence on the climate effects of climate policies, delivered in fulfillment of PhD requirements for the Energy and Resources Group Colloquium, UC Berkeley, Berkeley, CA, 11 Apr.

**Jones**, A. D., K. V. Calvin, A. C. Janetos, W. D. Collins, J. A. Edmonds, P. E. Thornton, L. P. Chini, A. M. Thomson, M. S. Torn, J. Mao, and X Shi (2012), Greenhouse gas policies influence climate via direct effects of land-use change, presented at Community Earth System Model Joint Land Model and Societal Dimensions Working Group Meeting, NCAR, Boulder, CO, 27 Feb - 2 Mar.

**Jones**, A. D., L. P. Chini, W. D. Collins, A. C. Janetos, J. Mao, X. Shi, A. M. Thomson, and M. S. Torn (2011), Regional-scale forcing and feedbacks from global-scale land use change, Abstract GC22C-06 presented at 2011 Fall Meeting, AGU, San Francisco, Calif., 5-9 Dec.

Smith, L. J., M. S. Torn, and A. D. **Jones** (2011), Ecological limits to terrestrial carbon dioxide removal strategies, Abstract GC51G-1115 poster presented at 2011 Fall Meeting, AGU, San Francisco, Calif., 5-9 Dec.

**Jones**, A. D., M. S. Torn, W. D. Collins, J. A. Edmonds, G. C. Hurtt, A. C. Janetos, J. Mao, L. P. Chini, A. M. Thomson, and P. E. Thornton (2011), Direct climate effects of managing terrestrial carbon, presented at Community Earth System Model Annual Workshop, NCAR, Breckenridge, CO, 20-23 Jun.

Torn, M. S., L. J. Smith, and A. D. **Jones** (2011), Terrestrial carbon dioxide removal: ecological limits and impacts, presented at Modeling and Policy of CO<sub>2</sub> Removal from the Atmosphere, International Center for Climate Governance, Venice, Italy, 30-31 May.

**Jones**, A. D., M. S. Torn, S. Levis, and W. D. Collins (2011), Biogeophysical effects of biofuel cultivation, presented at the Annual Community Earth System Model Land Model Working Group Meeting, NCAR, Boulder, CO, 15-17 Mar.

**Jones**, A. D., M. S. Torn, W. D. Collins, and W. J. Riley (2011), Characterizing the climate effects of biofuel cultivation, presented at the 23<sup>rd</sup> Conference on Climate Variability and Change, AMS, Seattle, WA, 22-27 Jan.

- Jones, A. D., M. S. Torn, W. J. Riley, and W. D. Collins (2010),** Factors influencing biofuel crops' effect on climate, Abstract B22D-07 presented at 2010 Fall Meeting, AGU, San Francisco, Calif., 13-17 Dec.
- Jones, A. D., M. S. Torn, W. J. Riley, and W. D. Collins (2010),** Characterizing the climate effects of biofuel cultivation, presented at the Community Climate System Model Annual Workshop, NCAR, Breckenridge, CO, 28 Jun - 1 Jul.
- Jones, A. D., R. J. Plevin, M. O'Hare, M. S. Torn, and D. M. Kammen (2008),** Approaches to modeling greenhouse gas releases from biofuels-induced land use change, presented at Society for Environmental Toxicology and Chemistry, 29th Annual Meeting, SETAC, Tampa, FL, 16-20 Nov.
- Jones, A. D., A. E. Farrell, R. J. Plevin, and M. O'Hare (2008),** Market mediated land use consequences of crop-based biofuels, presented at the 30<sup>th</sup> Symposium on Biotechnology for Fuels and Chemicals, SIM, New Orleans, LA, 4-7 May.
- Jones, A. D., R. J. Plevin, M. O'Hare, and A. E. Farrell (2008),** Market mediated land use consequences of crop-based biofuels, poster presented at the Conference on the Ecological Dimensions of Biofuels, ESA, Washington DC, 10 Mar.

## **Synergistic Activities**

- Deputy director of the Climate Readiness Institute since March 2014.
- Member of Land-use Model Intercomparison Project (LUMIP) Scientific Steering Committee since Aug 2014.
- Co-convenor for American Geophysical Union Fall Meeting session GC22F, on The Effects of Anthropogenic Land-Use and Land-Cover Change on Local to Global Climate: Forcings and Feedbacks from the Past to the Future
- Scientific advisor for the Climate Music Project, which seeks to create music inspired by climate data to increase public understanding of climate science.
- Organizing a workshop for the Aspen Global Change Institute designed to bridge the Earth system modeling (ESM) and impacts, adaptation, and vulnerability (IAV) research communities to address impacts-relevant evaluation of climate models.
- Invited participant in Aspen Global Change Institute Workshop on Experimental Design for CMIP6: Aerosol, Land Use, and Future Scenarios, Aspen, CO, 4-8 Aug, 2014.
- Invited participant in Energy Modeling Forum summer workshop Climate Change Impact and Integrated Assessments, Snowmass, CO, 21 Jul - 1 Aug, 2014.
- Invited participant in the US Global Change Research Program interagency workshop on land use / land cover scenarios and projections, Rockville, MD, 25-27 June, 2014.
- Selected participant in American Meteorological Society and American Geophysical Union Summer Policy Colloquium, Washington, DC, 1-10 Jun, 2014.

Selected participant in NSF-sponsored Dissertations Initiative for the Advancement of Climate Change Research (DISCCRS VIII), Colorado Springs, CO, 12-20 Oct, 2013.

Selected participant in workshop on Modeling Climate Change Impacts on Water and Crops at Different Scales, offered by: Euro-Mediterranean Center on Climate Change, Alghero, Italy, Nov 6-10, 2012.

Invited participant in 2012 Sackler Forum on Integrated Assessment Models and the Future Needs of Climate Change Research, sponsored by Royal Society (UK) and National Academy of Science (US).

Selected participant in Summer Course in Flux Observation and Modeling, offered by: David Moore and Russell Monson, University of Colorado Mountain Research Station, Nederland, CO, July 18-29, 2011.

Selected participant in Global Sustainability Summer School, offered by: Santa Fe Institute (SFI), Santa Fe, NM, July 12-25 2009.

Selected participant in the Global Change and Tropical Ecosystems Workshop April 22 - May 14 2009. Offered by: NSF Pan- American Advanced Studies Institute, Organization for Tropical Studies, Costa Rica.

**Academic  
Service**

Reviewer for:

IPCC AR5 Working Group II Report  
Nature Geoscience  
Nature Climate Change  
Journal of Climate  
Geophysical Research Letters  
Geoscientific Model Development  
Journal of Geophysical Research - Atmospheres

**Teaching  
Experience**

Graduate Student Instructor for ER102/202 “Quantitative Aspects of Global Environmental Problems”, Instructor: John Harte, Spring 2008, UC Berkeley.

Graduate Student Instructor for GSPP 290 “Advanced Quantitative Methods”, Instructor: Michael O’Hare, Fall 2008, UC Berkeley.

Guest lectures on linear algebra (ER98-Fall 2011) and environmental aspects of biofuels (ER101 – Fall 2010, and ESPM10 - Spring 2008), UC Berkeley.

Instructor for daylong tutorial on operating the Integrated Earth System Model, Oct 2012, Joint Global Change Research Institute.

Math Tutor for college-level calculus, statistics, and linear algebra, 1998-2004, Washington University in St. Louis.

**Professional** American Geophysical Union  
**Affiliations** American Physical Society  
Community Earth System Model – Land Model Working Group  
Community Earth System Model – Societal Dimensions Working Group